

Republic of Iraq

**Ministry of Higher Education
& Scientific Research**

University of Technology

Computer Science Department

Network Management



ONLINE EXAMINATION

SYSTEM

Team Members :

Reza Khaled & Khudhayer Abbas

Supervised By :

Dr.Mohamed Natiq

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CHAPTER ONE

CHAPTER TWO

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CHAPTER FOUR

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

اقْرَأْ بِاسْمِ رَبِّكَ الَّذِي خَلَقَ * خَلَقَ الْإِنْسَانَ مِنْ عَلَقٍ * اقْرَأْ
وَرَبُّكَ الْأَكْرَمُ * الَّذِي عَلَّمَ بِالْقَلَمِ * عَلَّمَ الْإِنْسَانَ مَا لَمْ يَعْلَمْ *

صَدَقَ اللَّهُ الْعَظِيمُ

إهداء

إلى عائلتي العزيزة

إلى ينباع العطاء التي لا تمل العطاء إلى من حبههم يجري في عروقي إلى من شاركوني الحياة بحلوها ومرها إلى من انتظروا هذه اللحظة بفارغ الصبر.

إلى أساتذتي الأفاضل

إلى من أناروا طريق المستقبل والحياة الجميلة إلى من أضاءوا بعلمهم عقولنا وهدوا بالجواب الصحيح حيرتنا فأظهروا بسماحتهم تواضع العلماء وبرحابتهم سماحة العارفين.

اصدقائي الأعزاء

إلى نبض القلب الذي به أحيأ إلى من سطرت معهم على جدار الزمن أجمل الذكريات إلى من عرفت كيف أجدهم وعلموني أن لا أضيعهم.

إليكم يا من فزتم بمحبتتي يا من اسعدني وجودكم في حياتي

كلمة شكر وتقدير

لابد لنا ونحن نخطو خطواتنا الأخيرة في الحياة الجامعية من وقفة نعود إلى أعوام قضيناها في رحاب الجامعة مع أساتذتنا الكرام الذين قدموا لنا الكثير باذلين بذلك جهودا كبيرة في بناء جيل الغد لتبعث الأمة من جديد...

وقبل أن نمضي نتقدم بأسمى آيات الشكر والامتنان والتقدير والمحبة إلى الذين علموني من علمهم بما ليس لي به من علم ...

إلى الذين حملوا أقدس رسالة في الحياة...

إلى الذين مهدوا لنا طريق العلم والمعرفة...

إلى جميع أساتذتنا الأفاضل.....

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Chapter one

1-1 Introduction

In the beginning , the online exam is electronic testing conducted by the users (students) through the Internet and it is either through testing centers managed by managers are assigned from private companies, which is awarded recognized certificates by many scientific bodies and international, or via the Internet directly, but the test via the Internet directly gives the result to the student or user to recognize the extent of his information, but does not give a certificate recognized it. In both cases, this test shows the extent of student's information, saves time and effort. As for the content we have to benefit from the scientific development and technological made in the our time and went mainly towards the world of the Internet and technology and what is the advantage that this world would provides to its user such as capacity and speed of storage, retrieval of data through the use of the database and the speed to execute mathematical and logical operation in addition to the many of other features that are provided by this world, some of them we used them and other we didn't use them because we didn't need them in our specialty, We've to benefit from this feature in addition to many features examination that will be explained later in the first chapter. As well as will discuss in this chapter also aims of the projects.

1-2 Education & Learning

1-Importance of Education and Learning

Education of any kind is necessary for man to develop socially and intellectually. Every day we learn something new . An education should be rooted to culture and committed to progress. Each of us has a social personality that is different from everyone else, we also have a learning personality that is different from everyone else. learning personality is the combination of natural talent, personal interest, current opportunity social environment, character, motivation and how the brain processes [2].

2-E-Examination

In today's world this learning capability is judged by means of Examinations are very important in judging one's personality. The traditional approach to measuring a person's level of knowledge in a topic has been the examination. Thus, the need of exams today in universities, schools, colleges and even companies for recruitment purposes .The general paper-pen tests/exams are now slowly being replaced by the online internet based testing system .[1]

3-Benefits of examination

- a-An element in assessment.
- b-Stimulus to order thoughts .
- c- Helps to think under pressure.
- d-Satisfaction of knowing that studies are done.
- e- Helps in judging one's capabilities for career options in future.[3]

1-3 The aims of project

The aim of this project is to design and implement a web based online examination system .The system Intends to be a general purpose system, exams can be defined in the system .Is create a system evaluates students in the field of networks accurately and at high speed , benefit from it in the universities in the field of assessment the student and in the interviews of job in the companies and government departments and private , to obtain international certificates recognized by it internationally .This is not limited only to the area of networking , but it is used in many fields , but we take network as an example.

Chapter Two

2-1 Introduction

In the second chapter will study online examination system features and components of examination as well as the techniques used in this project and multi choice technologies.

2-2 Online examination system features

In the second chapter will study the techniques used in this project and multi choice technologies.

A) Reliability : An examination result is only useful if it can be trusted. If a potential employer judges a potential employee on the basis of an examination result, the employer needs to trust the creation process, the supervision process and the marking process. [4]

B) It can generate various reports when and where required .[4]

C) User details : The software maintains the details for each student as well as provides a facility for editing the student details if required. There is Password based access for Individual ,Answer Sheet and General Mark Lists .[4]

2-3 Functionality Online Examination System

The system is consisting of a web server with a database facility. This server is configured with proper security measures. Clients (candidates) can connect through the internet with a web browser (e.g. : Internet Explorer, Mozilla Firefox etc) to the server and take the exam. Examiners too can connect to the server through the internet or through the intranet for setting up papers and to do other related tasks.[2]

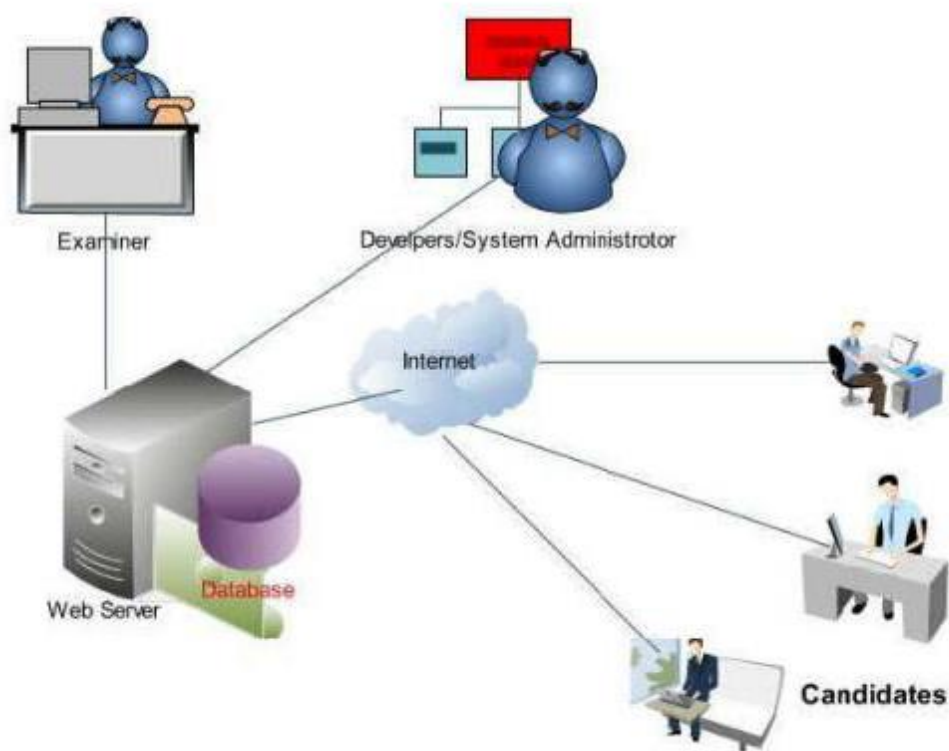


Figure (2-1) The network of Online Examination System

2-4 Components of an examination process

☐ **Administrator:**

We may want to differentiate among the users as far as the type of access they are permitted on various data values in the database . These differentiations are expressed in terms of authorization [5]. So the administrator is responsible of :

- 1-managing the system.
- 2- giving authorization to access the system defining teachers and student that access the system.
- 3-system check.

☐ **Faculty :**

The teacher is responsible of:

- 1-Determining the questions and there answer.
- 2-Determining the number of questions.
- 3- The degree for each question.
- 4-Checking the answers.
- 5-Authorization access for students only and defining them.

☐ **Student :**

The student can only do the exam by accessing the system with man and women user name and password .

- ☐ Supervise the examination – supervise the entry of students into the examination environment, identify them if necessary and end the exam when it's period is over.
- ☐ Mark the examinations.

2-5 Exam techniques for multiple choice exams

Following these instructions will help you use your exam time more efficiently and increase your chances of passing.

1-System of round

1. During round one, only answer the easy questions. Skip anything you do not know.
2. During round two, answer the more difficult questions. Skip the most difficult ones.
3. During round three, answer the most difficult questions. Then make sure you have filled in everything. [7]

This way you use your exam time most efficiently.

2-Other exam techniques

Generally, the rules with multiple choice (providing a choice of four possible answers) are:

1. One out of four is clearly incorrect.
2. A second one appears to be incorrect, following some deliberation.
3. You must now decide which of the remaining two is the best answer. The following tips may help:

-Read the question and answers carefully. Look out for key terms. Read carefully but do not assume too much. Many of the questions are not set with the purpose of being 'deep'.

-The key is to choose the best answer, but the answer does not need to fit perfectly. The other answers are at times "total nonsense", at other times merely "less correct".

-If you have prepared well for the exam and you have read the question carefully, then your first impression is usually the correct one. Do not change your mind unless you are absolutely sure! [7]

3-Coding with doubt

a-You are convinced which answers are the incorrect ones, but you still have doubts about the remaining two answers.

- **Rule of thumb**

1-Read the question and the choice of answers carefully and compare any key terms in the question with those in the remaining two answers. The answers will both appear correct to a certain extent.

2.Choose the best possible answer; the perfect answer does not exist.

3.Do not read too much into the question and follow your first impression once you have read everything carefully.

b-First, one particular answer seems correct, but once you look at the question and choice of answers again(for example when you are double-checking), you start to doubt your choice of answer.[7]

2-6 Summary of exam techniques multiple choice exams

1.Work according to a system of rounds.

2.Look for the 'best' answer, not the 100% 'perfect' answer.

3.If in doubt: if you are well prepared, your first impression is usually correct.

4.Change your answer only if you have gained a new insight and never change the answer if you know from previous exams that you tend to make mistakes in this way.

You are allowed to take this summary of exam techniques with you to the exam.

2-7 Technologies used

This project is a web application that is developed in ASP.NET .

1-Database Design (DB).

2-Input Design (ASP.NET).

3-Coding (C#).

Chapter Three

Implementation of Online Exam using ASP.NET coding and visual studio

The requirements needed to create and operate this project:

3.1 The software requirements

1- Operating system:

We need one of the following operating system:

- Windows XP (x86) with Service Pack 3 - all editions except Starter Edition.
- Windows Vista (x86 & x64) with Service Pack 2- all editions except Starter .
- Windows 7 (x86 & x64).
- Windows Server 2003 (x86 & x64) with Service Pack 2.
- Windows Server 2003 R2 (x86 & x64).
- Windows Server 2008 (x86 & x64) with Service Pack 2.
- Windows Server 2008 R2 (x64).[6]

2- Supported Architectures:

- 32-Bit (x86).
- 64-Bit (x64).[6]

3- Visual Studio 2012.

4- Web browser.

3.2 Hardware Requirements:

To install visual studio 2012 we need:

- Computer that has a 1.6GHz or faster processor.
- 1 GB (32 Bit) or 2 GB (64 Bit) RAM (Add 512 MB if running in a virtual machine).
- 3GB of available hard disk space.
- 5400 RPM hard disk drive.
- DirectX 9 capable video card running at 1024 x 768 or higher-resolution display.
- DVD-ROM Drive.[6]

3.3 Introduction

This project is about designing a computerized web based examination system , by using Oracle Database, for educational institutes for testing their student .It is general purpose system, this mean any one can design man and women own examination.

The lecturer can determine and store the exam information which include: exam name , date , period and the question , their answers and there marks. Each exam is protected by a user name and a password, in which only the lecture knows them . Many students can register to an exam, the registration process is managed by the lecturer. Only registered students are able to access the exam. It is a web based system, so the student can log on man/woman exam from any place(computer) connected to the network in which the exam server is connected to it.

In addition, this chapter includes more clarification about the project components and also the pages and how to work and this chapter also contains information on the data base and the tables exists in the database and also how to run this system step by step .

3.4 The system consists of three parts:

- 1.Administer.
2. Teacher.
3. Student.

1-Administion

The administer is responsible of managing the system :

- 1- Granting access authorization for the system.
- 2- Defining teachers and students that access the system.

2- Teacher

The responsibilities of the teacher are :

- 1-Determining the questions and there answers.
- 2-Determine the number of questions and the degree for each question .
- 3-Responsible for checking the answers.
- 4-Granting access for the students to the system by assigning user name and a password for each student.

3- Student

The student with man and woman user name and password can log on to the system remotely by using web browser and do the exam.

→The system flowchart is shown in figure (3-1).

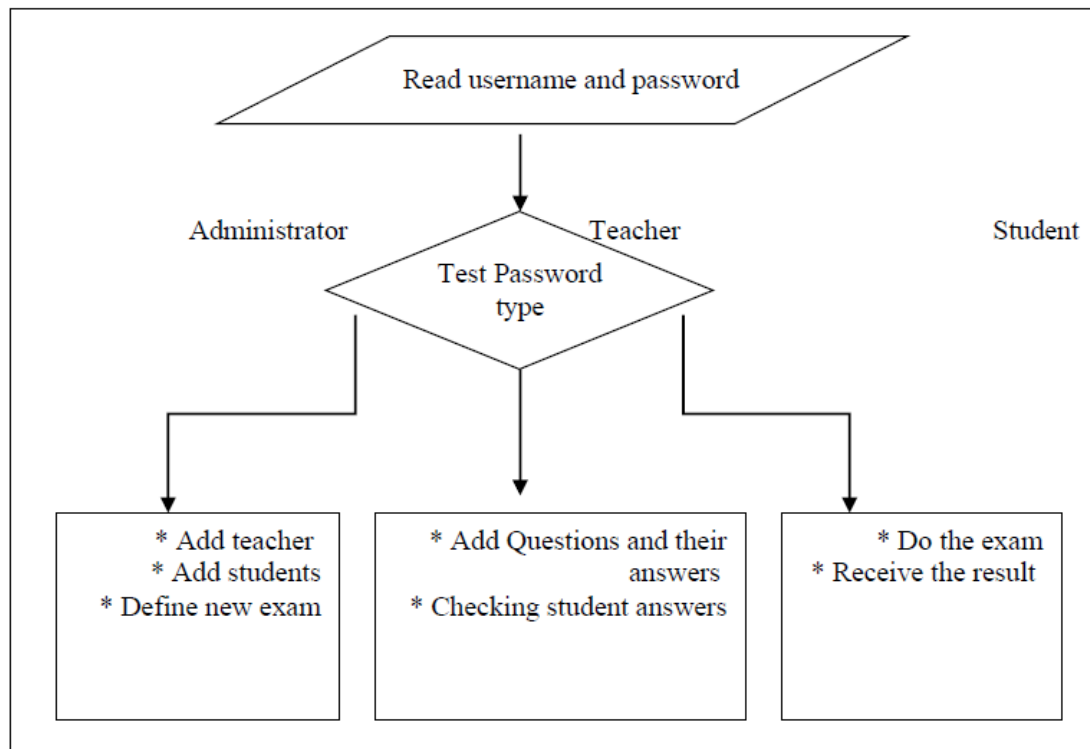


Figure (3-1) system flowchart

3.5 Project execution:

The project consist of six page we describe them briefly in this chapter , some of these pages can be viewed by the manager only and the other can be viewed by the student and the manager We will describe the method of implementation this test from the beginning and what appear to the user we run a program .

1- Home page (register) :

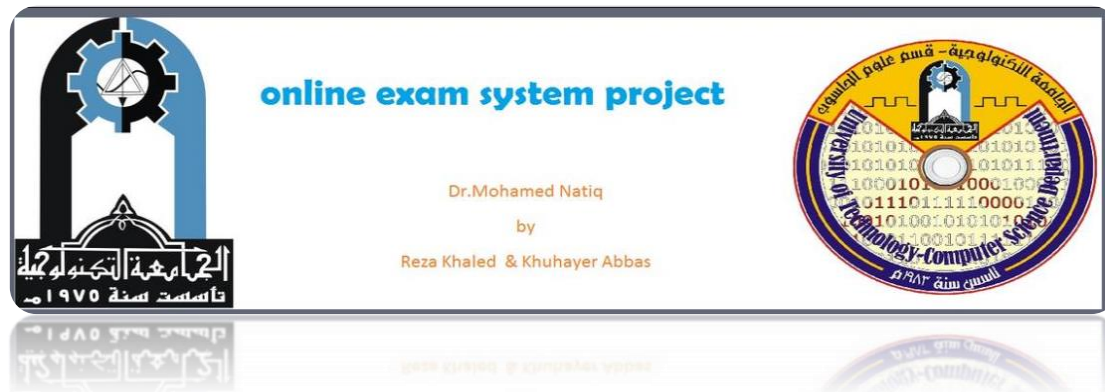
A registration form with a light blue background. It contains four input fields: 'User Name:', 'password:', 'confirm password:', and 'email:'. Each field is followed by a white rectangular input box. At the bottom right of the form is a button labeled 'register'.

Figure (3-2) Home page

From this page the implementation of online exam will begin. This page consists of four fields one to the user name and the other to the password and other to confirm password and other to email of that manager and then the manager must be click login to make compare between the data that man/woman be inserted and the data that be stored before in the data base if it is wrong or null then the same page will login with a

statement tell as that it is wrong in manager user name and/or password ,and the manager should be reinsert the correct user name and password and click login to moving the next page that welcome to the user (student) .

2- About as page :

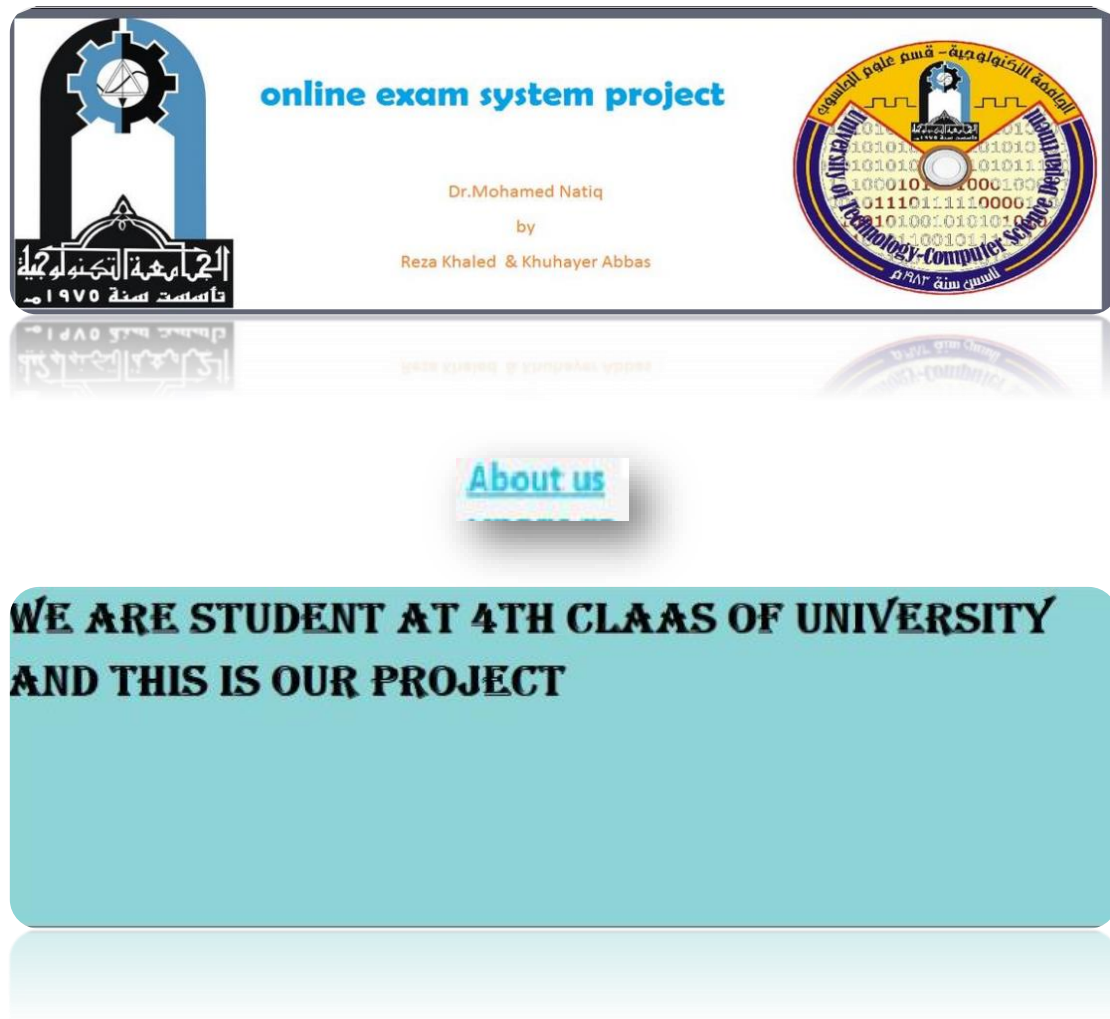
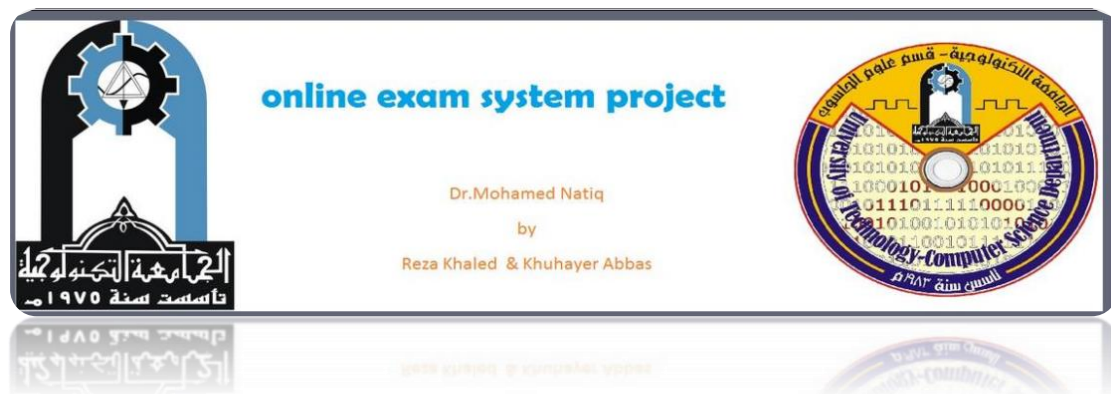


Figure (3-3) About as

-This about as page is includes contents the information about student that have executed the project and any class of university.

3- Contact with as page :



[contact with us](#)

CONTACT WITH US

- **Khuhayer Abbas**
 - [On Facebook](#)
 - call number 009647709722568
- **Reza khaled**
 - [on Facebook](#)
 - call number 009647703544876

Figure (3-4) Contact with us page

-This contact with as page include contents phone number and facebook address for student that execution the project . Any user who has access to the site and do not know anything about the project or any user wants to know more about the nature of this project and how it can work to ask one of the students that excution the project.

4- Student page (login) :

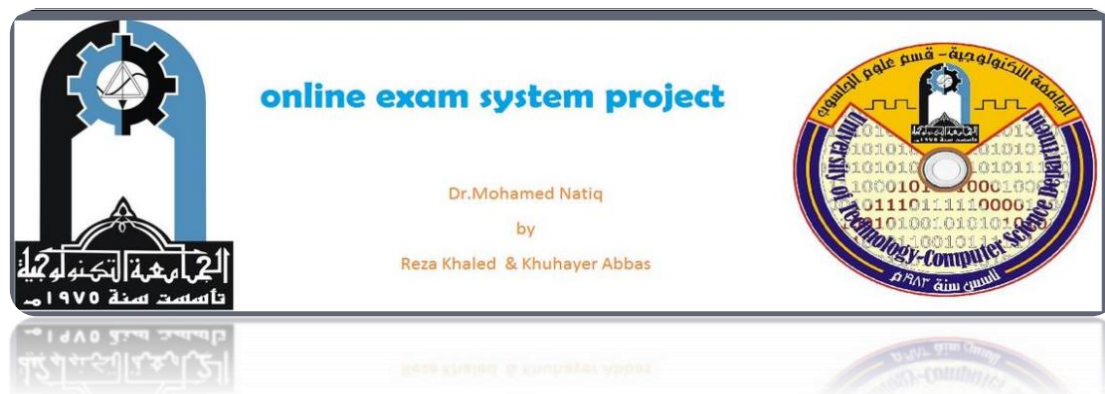
A login form with a light blue background. It contains two input fields: 'User Name:' and 'Password :'. Below these fields is a button labeled 'Enter the exam'.

Figure (3-5) Student page

This page working as the same as home page just it different from it in that its data particular in student instead of manager and after the student enter the correct data an click login man and woman will enter to the page of questions named answer . If the student insert the user name or password Incorrectly do not entered to the question page , because the user name or password for student is stored in the data base so I can't access to the other page .

5- Questions page :

online exam system project

Dr.Mohamed Natiq
by
Reza Khaled & Khuhayer Abbas

Time left 53 : 26

answer the qastion
how old are you?

Enter the option (A)
20

Enter the option (B)
08/05/2015 09:14:17 ص

Enter the option (C):
22

Enter the option (D) :
23

Write the correct answer :

next

Figure(3-6) Questions page

Through this page we can retrieve question by textfile in case if the questions are found in this textfile not found in data base and we want to edit or delete them from the textbox either if we want to add a new question, these fields represent by (Textfile) since the field of question text contains questions that we will modify, add, or deleted from the textfile according to the command , which will use it whether it was insert ,edit or delete, The four next fields that follow it contain options of answer and it corresponds to check Box particular type of answer whether this answer is correct or not, if the answer is correct, it will be mark (1) in check Box in front of a word True if not true , it will be mark (-1). This page also include contains a counter have a specific time by the teacher during this time the student has answered all the questions and then after moving to result page .

- **Textfile that contain questions :**

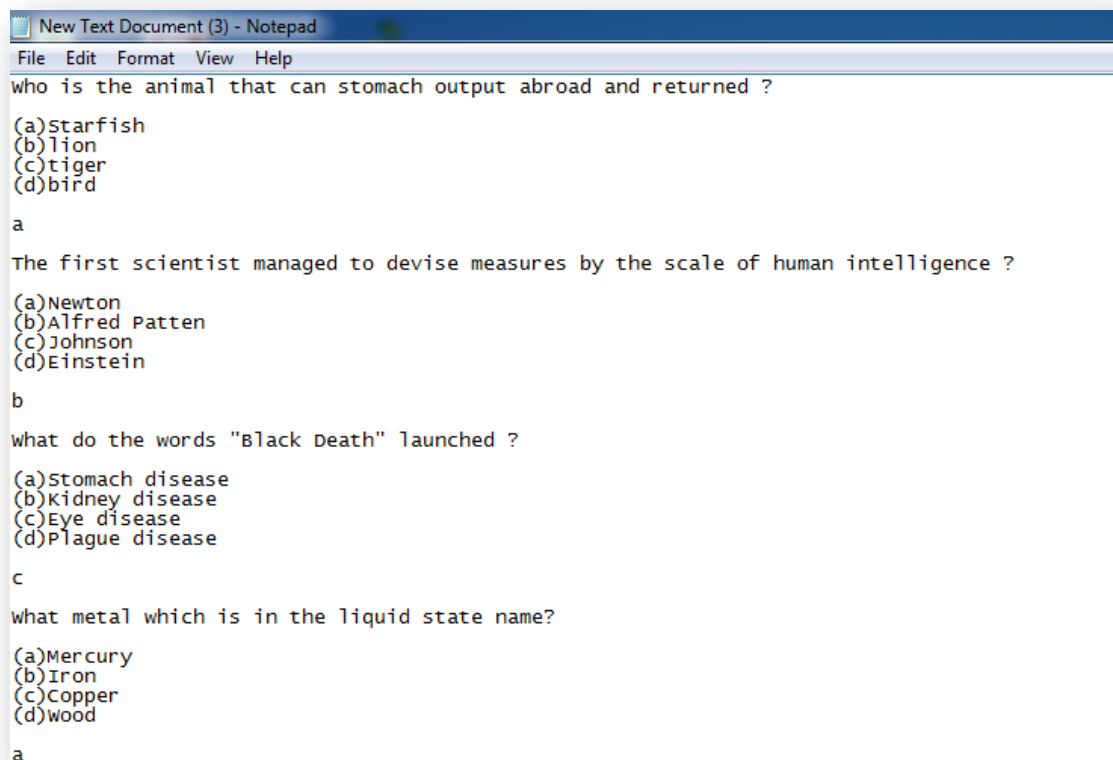


Figure (3-7) Textfile

6- Result page :

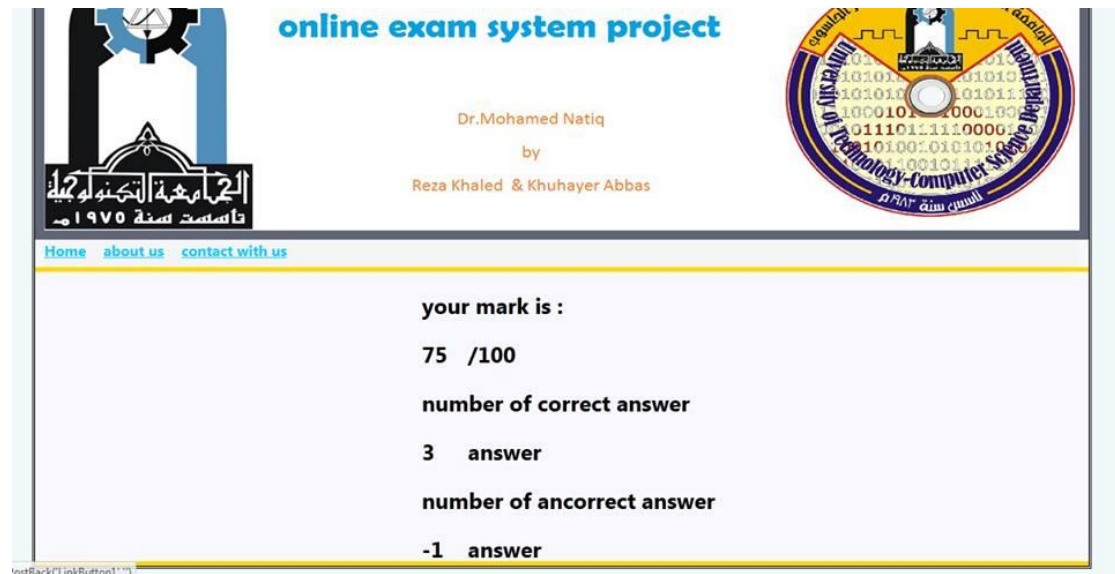


Figure (3-8) Result page

This is the final page it contain the result of the student that be passed the exam whether it succeed or not. In addition to that this page also includes a number of right and wrong answers . Number of correct answers are positive values and the number of wrong answers is negative .

3.6 How to open project :

1. Double click on the visual studio icon.



Figure (3-9) Visual Studio Icon

2. From file in the visual studio tool bar choose project/solution as follow:

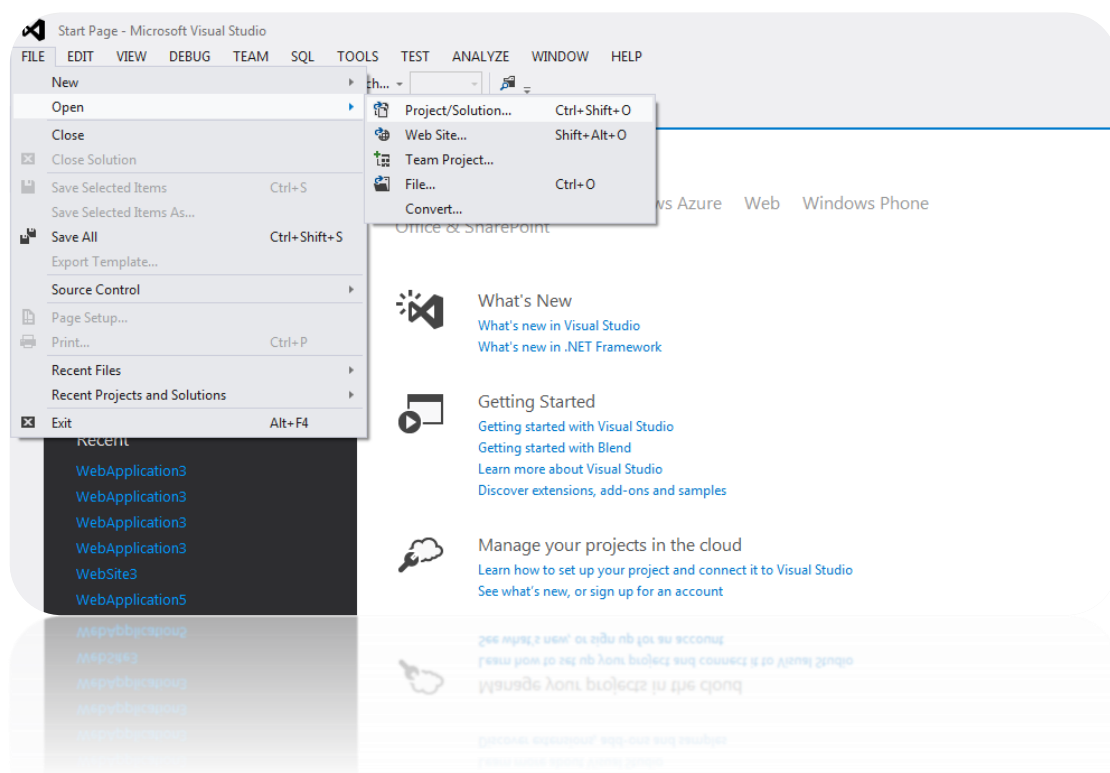


Figure (3-10) Visual studio tool bar

3. Choose document → WebApplication3 → Open :

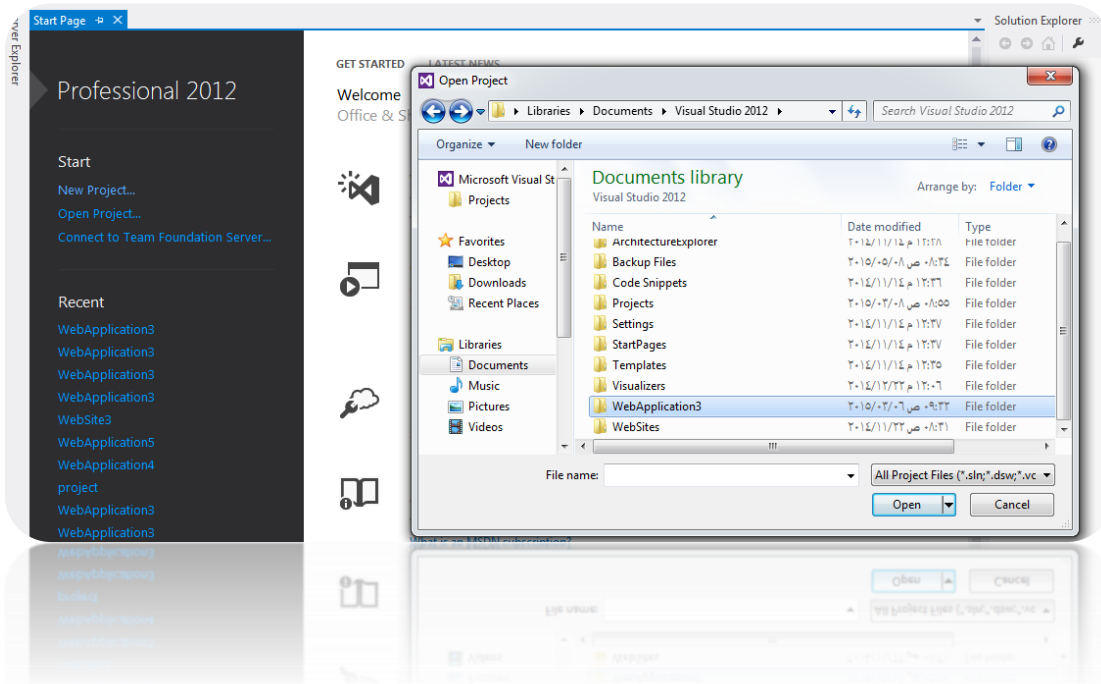


Figure (3-11)

4. WebApplication3 → Open :

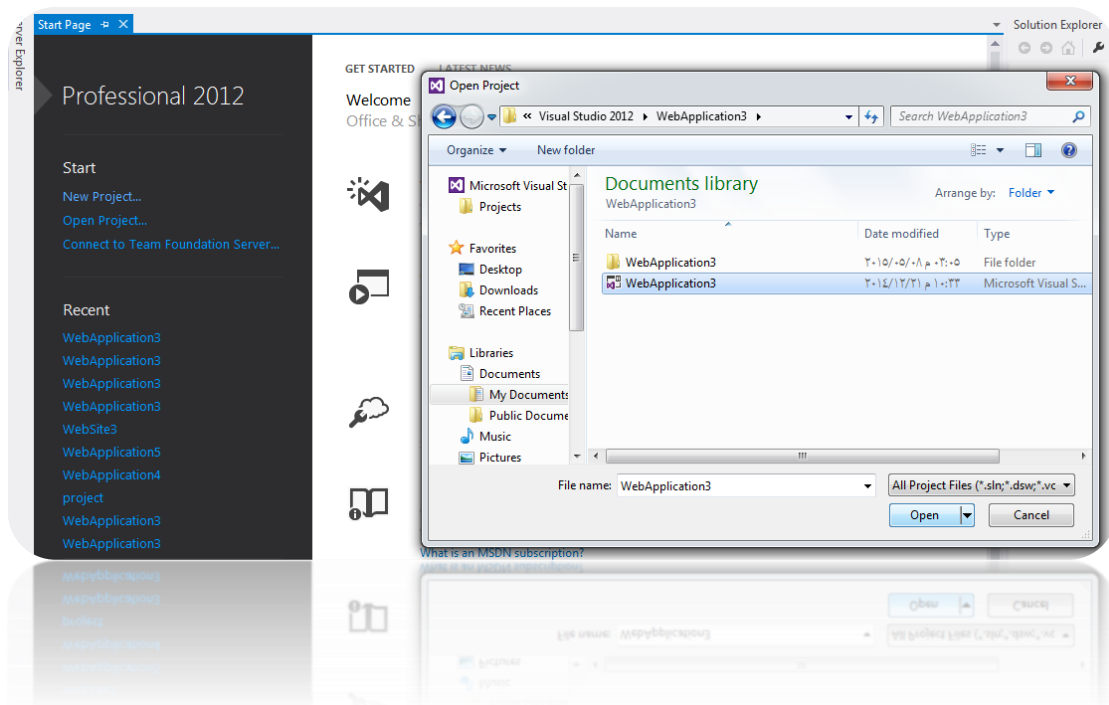


Figure (3-12)

5- Open the project :

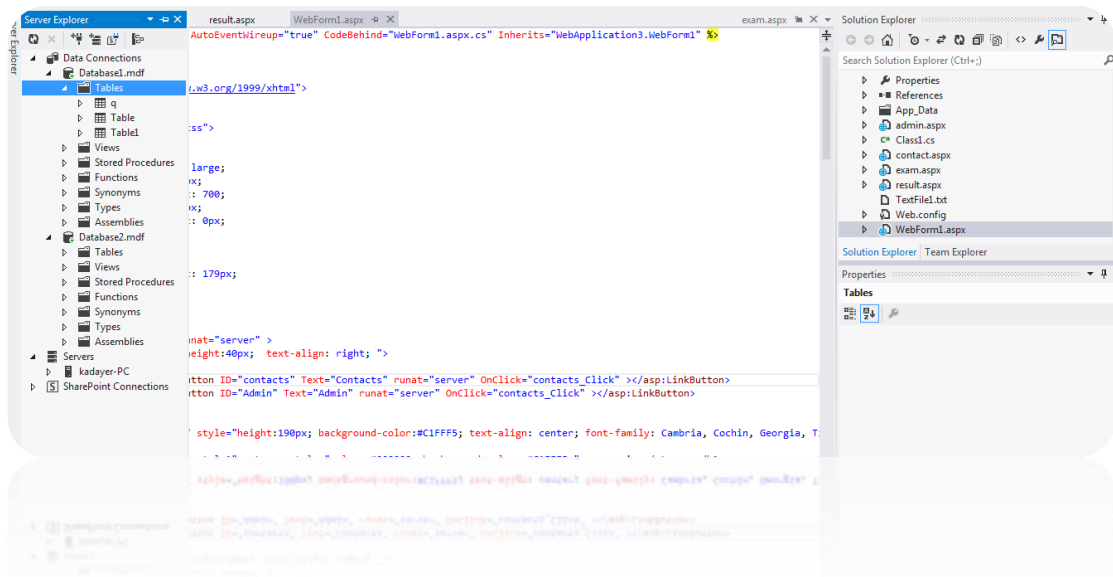


figure (3-13) open the project

3.7 Database :

In our project we have a database contain one table, that table contain four fields as following :

1-Table in database :

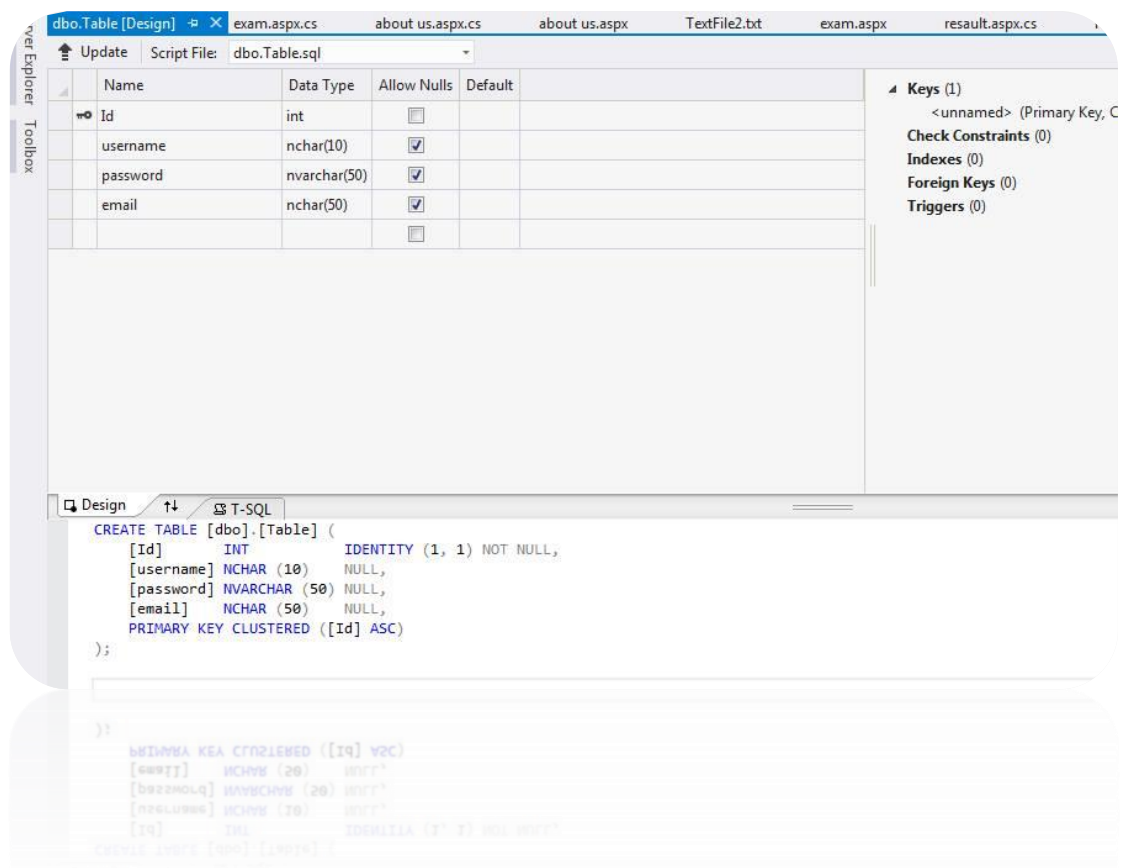


Figure (3-14) Table in database

2- It contains four fields:

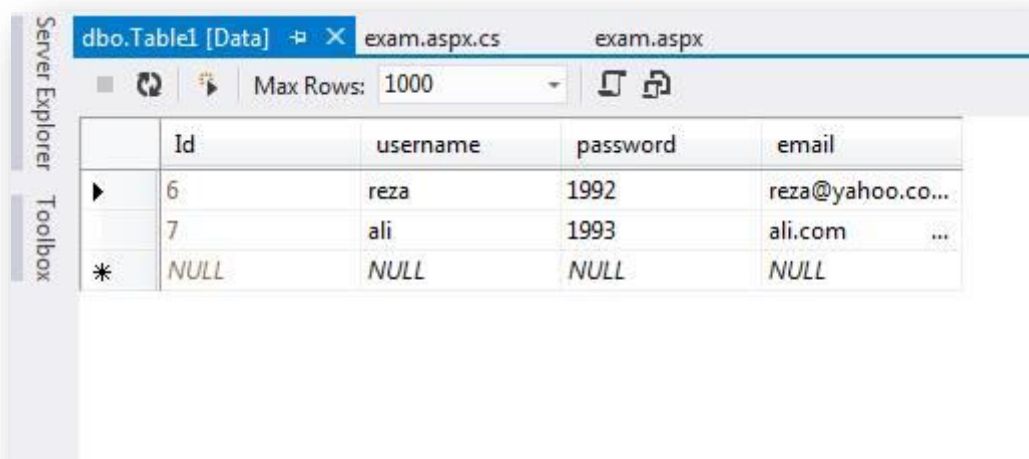
ID: It contains a number work as a key.

Name: it contains the name of the users .

Password: It contains the password of the users .

Email: It contains the email of the users .

3- Show table of components (fields) in database :



The screenshot shows a SQL Server Enterprise Manager window with the 'Server Explorer' pane on the left. The 'Toolbox' pane is also visible. The main area displays a table named 'dbo.Table1 [Data]' with the following columns: Id, username, password, and email. The table contains two rows of data and a row with NULL values.

	Id	username	password	email
▶	6	reza	1992	reza@yahoo.co...
	7	ali	1993	ali.com ...
*	NULL	NULL	NULL	NULL

Figure (3-15) show table components (fields) in database

Chapter four

Conclusion :

1. Different this system from other systems that the question saves in the textfile , but other systems the question saves in the database.
2. Used in the this system three languages is C# and Sql and ASP.NET used ASP.NET because this language is easy code and write in C# and this closed resource .
3. Although the e_ examination provides the time and effort and gives better results than the assessment paper but its built in initially expensive and time consuming.
4. E-examination is a assessed the Cognitive abilities of user's .
5. Visual Studio Ultimate Is the best types of Visual Studio for the designers that are not Professional and that for many of the advantages that offered .
6. Should make a backup copy of the program when applying to each stage of design.
7. Before starting the work of any program must at first have to take into consideration before thinking about anything what programming language the best and most appropriate and that meet the requirements of the project and what software is best to implement this program as well as the rest of the requirement of hard ware and software that we need to work and implement any program or system.

Future works :

- 1-Possible to use other programming languages such as PHP.
- 2-Possible Make each teacher has its own page for the purpose of registration.

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